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# Forest

A forest is a big area dominated by trees.[1] Hundreds of more precise definitions of forest are used throughout the world, incorporating factors such as tree density, tree height, land use, judicial standing and eco-friendly function.[2][3][4] According to the extensively used[5][6] Food and Agriculture Organization definition, forests covered 4 billion hectares (9.9×109 acres) (15 million square miles) or approximately 30 percent of the world's land area in 2006.[4]

Forests are the dominant terrestrial ecosystem of Earth, and are distributed across the globe.[7] Forests account for 75% of the gross primary productivity of the Earth's biosphere, and contain 80% of the Earth's plant biomass.[7]

Forests at different latitudes and elevations form distinctly different ecozones: boreal forests near the poles, tropical forests near the equator and temperate forests at mid-latitudes. Higher elevation areas tend to support forests similar to those at higher latitudes, and amount of precipitation also affects forest composition.

Human society and forests influence each other in both positive and negative ways.[8] Forests provide ecosystem services to humans and serve as tourist attractions. Forests can also affect people's health. Human activities, including harvesting forest resources, can negatively affect forest ecosystems.

Although forest is a term of common parlance, there is no universally recognised precise definition, with more than 800 definitions of forest used around the world.[4] Although a forest is usually defined by the presence of trees, under many definitions an area completely lacking trees may still be considered a forest if it grew trees in the past, will grow trees in the future,[9] or was legally designated as a forest regardless of vegetation type.[10][11]

## Water

Water is a transparent, tasteless, odorless, and nearly colorless chemical substance that is the main constituent of Earth's streams, lakes, and oceans, and the fluids of most living organisms. Its chemical formula is H2O, meaning that each of its molecules contains one oxygen and two hydrogen atoms that are connected by covalent bonds. Strictly speaking, water refers to the liquid state of a substance that prevails at standard ambient temperature and pressure; but it often refers also to its solid state (ice) or its gaseous state (steam or water vapor). It also occurs in nature as snow, glaciers, ice packs and icebergs, clouds, fog, dew, aquifers, and atmospheric humidity.

Water covers 71% of the Earth's surface.[1] It is vital for all known forms of life. On Earth, 96.5% of the planet's crust water is found in seas and oceans, 1.7% in groundwater, 1.7% in glaciers and the ice caps of Antarctica and Greenland, a small fraction in other large water bodies, 0.001% in the air as vapor, clouds (formed of ice and liquid water suspended in air), and precipitation.[2][3] Only 2.5% of this water is freshwater, and 98.8% of that water is in ice (excepting ice in clouds) and groundwater. Less than 0.3% of all freshwater is in rivers, lakes, and the atmosphere, and an even smaller amount of the Earth's freshwater (0.003%) is contained within biological bodies and manufactured products.[2] A greater quantity of water is found in the earth's interior.[4]

Water on Earth moves continually through the water cycle of evaporation and transpiration (evapotranspiration), condensation, precipitation, and runoff, usually reaching the sea. Evaporation and transpiration contribute to the precipitation over land. Large amounts of water are also chemically combined or adsorbed in hydrated minerals.

Safe drinking water is essential to humans and other lifeforms even though it provides no calories or organic nutrients. Access to safe drinking water has improved over the last decades in almost every part of the world, but approximately one billion people still lack access to safe water and over 2.5 billion lack access to adequate sanitation.[5] However, some observers have estimated that by 2025 more than half of the world population will be facing water-based vulnerability.[6] A report, issued in November 2009, suggests that by 2030, in some developing regions of the world, water demand will exceed supply by 50%.[7]

# Recycling

Recycling is the process of converting waste materials into new materials and objects. It is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions (compared to plastic production,[1][2] for example). Recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from landfilling).

Recycling is a key component of modern waste reduction and is the third component of the "Reduce, Reuse, and Recycle" waste hierarchy.[3][4]

There are some ISO standards related to recycling such as ISO 15270:2008 for plastics waste and ISO 14001:2004 for environmental management control of recycling practice.

Recyclable materials include many kinds of glass, paper, and cardboard, metal, plastic, tires, textiles, and electronics. The composting or other reuse of biodegradable waste—such as food or garden waste—is also considered recycling.[2] Materials to be recycled are either brought to a collection center or picked up from the curbside, then sorted, cleaned, and reprocessed into new materials destined for manufacturing.

In the strictest sense, recycling of a material would produce a fresh supply of the same material—for example, used office paper would be converted into new office paper or used polystyrene foam into new polystyrene. However, this is often difficult or too expensive (compared with producing the same product from raw materials or other sources), so "recycling" of many products or materials involves their reuse in producing different materials (for example, paperboard) instead. Another form of recycling is the salvage of certain materials from complex products, either due to their intrinsic value (such as lead from car batteries, or gold from circuit boards), or due to their hazardous nature (e.g., removal and reuse of mercury from thermometers and thermostats).

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| LESSON | TOPIC | ASSINGMENT | Points | DUE |
| 1 | What is distance Learning? | Wiki #1 | 10 | March 10 |
| Presentation | 20 |  |
| 2 | History & Theories | Brief Paper | 20 | March 24 |
| Spring Break | | | | |
| 3 | Distance Learners | Discussion #1 | 10 | April 7 |
| Group Project | 50 | April 14 |
| 4 | Media Selection | Blog #1 | 10 | April 21 |

**Class Schedule**

## Natural Environment

The natural environment encompasses all living and non-living things occurring naturally, meaning in this case not artificial. The term is most often applied to the Earth or some parts of Earth. This environment encompasses the interaction of all living species, climate, weather, and natural resources that affect human survival and economic activity. [1] The concept of the natural environment can be distinguished as components:

Complete ecological units that function as natural systems without massive civilized human intervention, including all vegetation, microorganisms, soil, rocks, atmosphere, and natural phenomena that occur within their boundaries and their nature.

Universal natural resources and physical phenomena that lack clear-cut boundaries, such as air, water, and climate, as well as energy, radiation, electric charge, and magnetism, not originating from civilized human actions

In contrast to the natural environment is the built environment. In such areas where man has fundamentally transformed landscapes such as urban settings and agricultural land conversion, the natural environment is greatly modified into a simplified human environment. Even acts which seem less extreme, such as building a mud hut or a photovoltaic system in the desert, modify the natural environment into an artificial one. Though many animals build things to provide a better environment for themselves, they are not human, hence beaver dams and the works of Mound-building termites are thought of as natural.

People seldom find absolutely natural environments on Earth, and naturalness usually varies in a continuum, from 100% natural in one extreme to 0% natural in the other. More precisely, we can consider the different aspects or components of an environment, and see that their degree of naturalness is not uniform.[2] If, for instance, in an agricultural field, the mineralogic composition and the structure of its soil are similar to those of an undisturbed forest soil, but the structure is quite different.

Natural environment is often used as a synonym for habitat. For instance, when we say that the natural environment of giraffes is the savanna.

## Ecosystem

An ecosystem is a community made up of living organisms and nonliving components such as air, water and mineral soil, all interacting as a system.[2] (However, ecosystems can be defined in many ways.[3]) The biotic and abiotic components interact through nutrient cycles and energy flows.[4] Ecosystems are the network of interactions among organisms, and between organisms and their environment.[5] Ecosystems can be of any size but one ecosystem has a specific, limited space.[6] On a larger scale, some scientists view the entire planet as one ecosystem).[7]

Energy, water, nitrogen and soil minerals are other essential abiotic components of an ecosystem. The energy that flows through ecosystems comes primarily from the sun, through photosynthesis. Photosynthesis also captures carbon dioxide from the atmosphere. Animals also play an important role in the movement of matter and energy through ecoystems. They influence the amount plant and microbial biomass that lives in the system. As organic matter dies, decomposers release carbon back to the atmosphere. This process also facilitates nutrient cycling by converting nutrients stored in dead biomass back to a form that can be used again by plants and other microbes.[8]

Ecosystems are controlled both by external and internal factors. External factors such as climate, the parent material that forms the soil, topography and time have a big impact on ecosystems, but they are not themselves influenced by the ecosystem.[9] Ecosystems are dynamic: they are subject to periodic disturbances and are in the process of recovering from past disturbances that were external to the ecosystem.[10] Internal factors are different. They not only control ecosystem processes but are also controlled by them. Internal factors are subject to feedback loops.[9]

Humans operate within ecosystems and the cumulative effects of human activities can influence even external factors.[9] Climate change is an example of that cumulative impact. Ecosystems provide benefits--called Ecosystem services--which people depend on and can disrupt to their own detriment. Best practices of Ecosystem management suggests that it's better to manage at the ecosystem level, rather than trying to managing individual species.

**Η Οικογένειά Μου**